HOLOGIC®
The Science of Sure

Introducing the SuperSonic™ MACH™ 30 Ultrasound Imaging Platform

SUPERSONIC® MACH™ 30

UltraFast Intelligence

SuperSonic® MACH™ 30

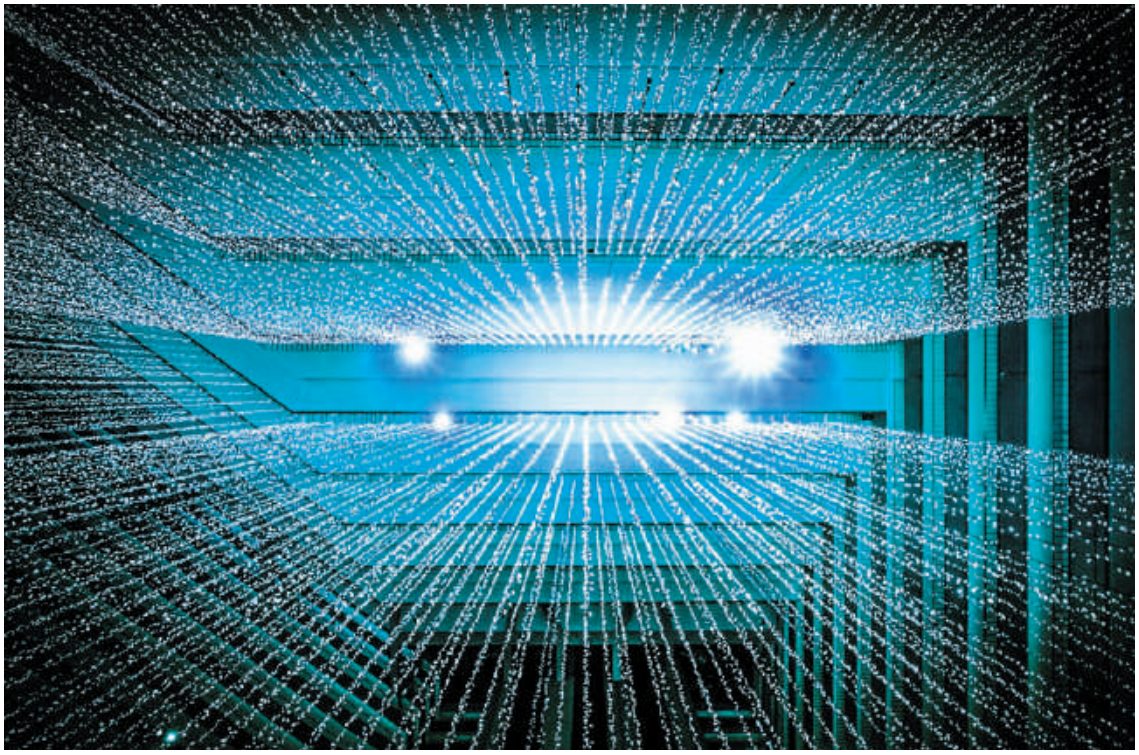
Addressing Your Expectations with UltraFast Innovations

SuperSonic® MACH™ 30 ultrasound system leverages more than 10 years of clinical expertise to help you handle a wide range of exams, from routine to comprehensive, with **ease and confidence**.

By analyzing your exam workflow, SuperSonic MACH 30 was designed to **maximize comfort and drive efficiency** in a busy practice thanks to its ease of use and streamlined ergonomics.

Deep inside is a powerful processor running on our exclusive UltraFast technology, the design for which was inspired by the video gaming industry. The intelligent signal processing with **image capture capacity of up to 20,000 frames per second**[1] brings unlimited possibilities into ultrasound imaging, including excellent image quality, innovative imaging modes and future AI integration.

The image quality of the SuperSonic MACH 30 combined with access to advanced capabilities delivers the level of **premium performance** you expect, and patients deserve.



Supporting User Comfort

For Improved Experience and Workflow

1. Widescreen 23” full HD monitor

Enhanced image uniformity, deeper blacks and refined detail

2. Large 15” full HD touch display

More flexibility to define your workflow

3. Intuitive control panel with revolutionary SonicPad™

Improved user experience and workflow

4. Low noise level, optimized cooling fan architecture

Reduced noise for all environments

5. Reduced footprint

Suitable for any practice

SONICPAD™

Being able to “focus on what you see, and not on what you do,” helping reduce user’s movements and examination time to improve workflow.

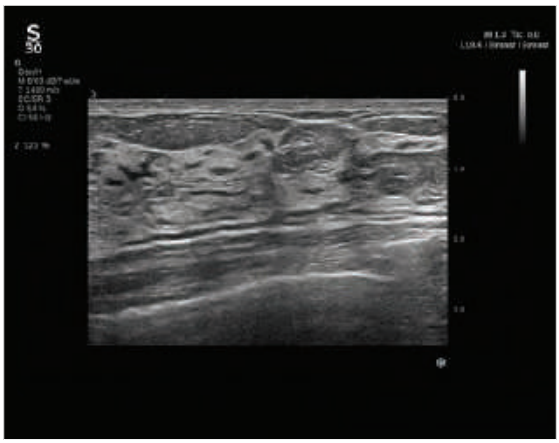
Exceptional B-mode Imaging

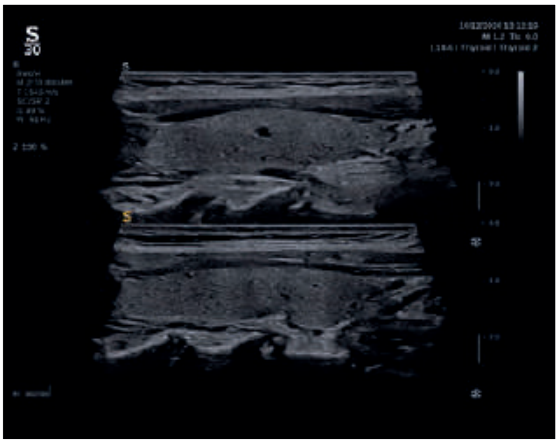
Incredible Definition in Fundamental and Harmonic Imaging Modes

The innovative transducer designs and powerful capabilities of software-based architecture are optimizing signal-to-noise ratio at each step of signal processing, offering you **an incredible definition in both fundamental and harmonic imaging modes.**[2, 3, 4]

A set of advanced features is available to simplify and speed up the image acquisition process. These include:

- Optimized penetration settings: for visualizing structures at variable depths and in dense breasts.
- SuperCompound: fast compounding designed for smooth images with reduced speckle.
- SuperRes: delineation of structures to help improve lesion conspicuity.
- TissueTuner: clear images obtained by matching the speed of sound to tissue density.
- AutoTGC: designed for optimization of the gain for the entire image.





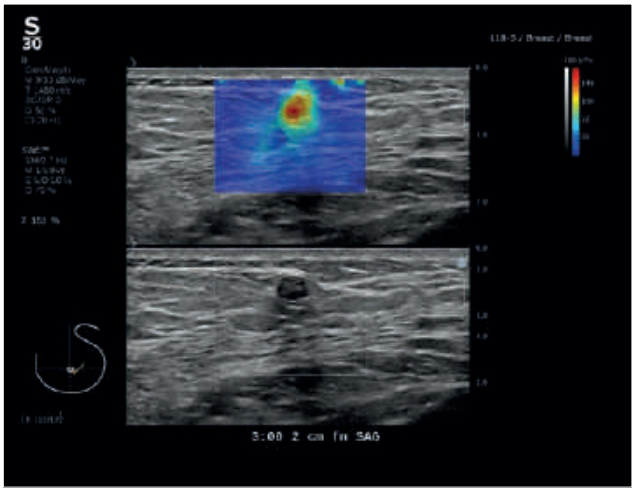
ShearWave™ PLUS Elastography

A New Kind of Elastography Experience

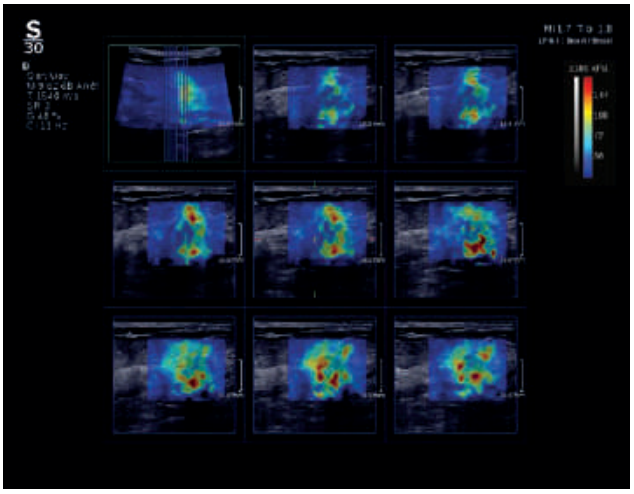
ShearWave™ PLUS elastography (SWE PLUS) is **the only technique capable of visualizing, analyzing and quantifying tissue stiffness in real time, on all transducers**. This non-invasive approach remains reliable and highly reproducible in 2D and 3D.[5, 6, 7]

Breast

With over 200 publications[8] in peer-reviewed medical journals, SWE has been proven to be a complementary tool for: breast lesion diagnosis and characterization[9]; biopsy planning[10] and treatment; and therapy monitoring[11]; and prognosis.

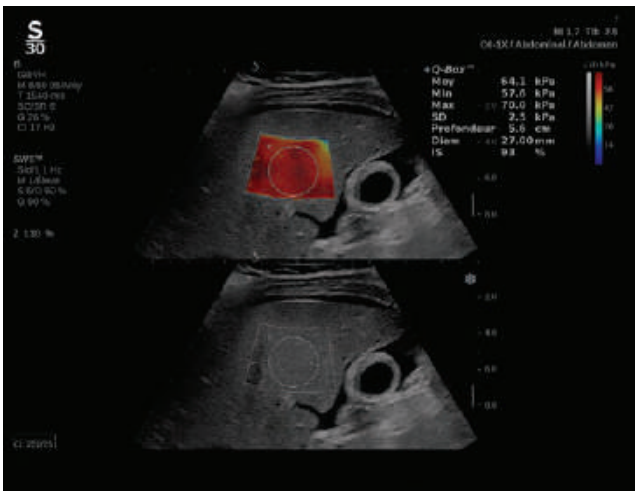


New! Further enhance breast lesion assessment with access to **3D ShearWave PLUS** elastography volume in a single acquisition. Breast tissue can be visualized in any plane of 3D volume and this large color-coded map provides information on the elasticity distribution inside and around the lesion.



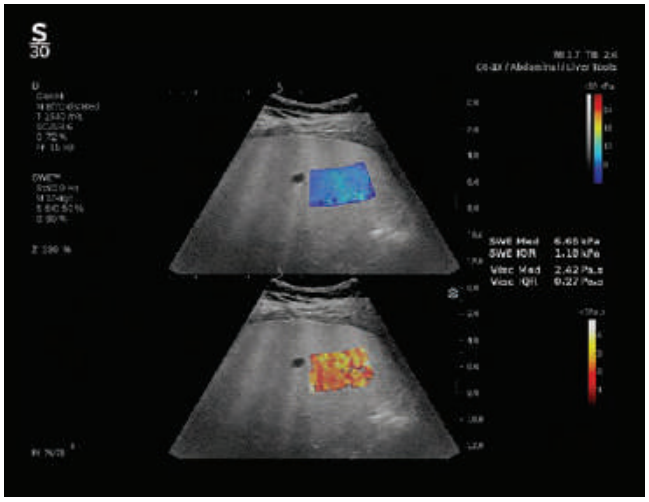
LIVER

The utility of SWE in the management of patients with chronic liver disease has been demonstrated in more than 160 clinical publications[12] for evaluation[13] and diagnosis[14] of hepatic fibrosis and follow-up and monitoring of patients.



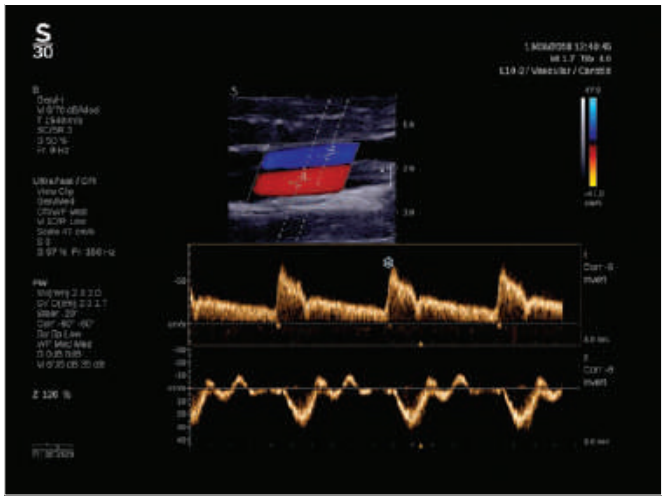
Innovative Imaging Modes

Features Designed to Improve Diagnostic Accuracy



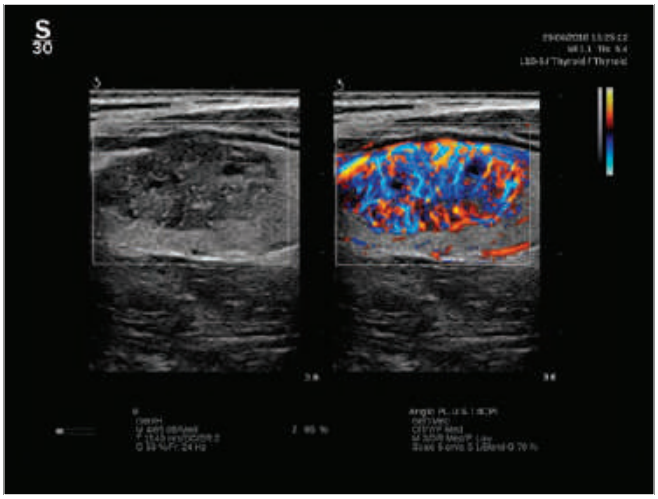
Liver Ultrasound Markers

Introducing unprecedented tools for non-invasive assessment of liver disease severity: Att PLUS and SSp PLUS to measure attenuation and speed of sound in the liver, and Vi PLUS to quantify liver tissue viscosity.



UltraFast Doppler

UltraFast Doppler offers higher frame rates on the SuperSonic® MACH™ 30 system[15] and the same spectrogram quality as conventional PW to simultaneously capture all of the PW Doppler signals at different locations in a single acquisition. This allows them to be compared during the same cardiac cycle.

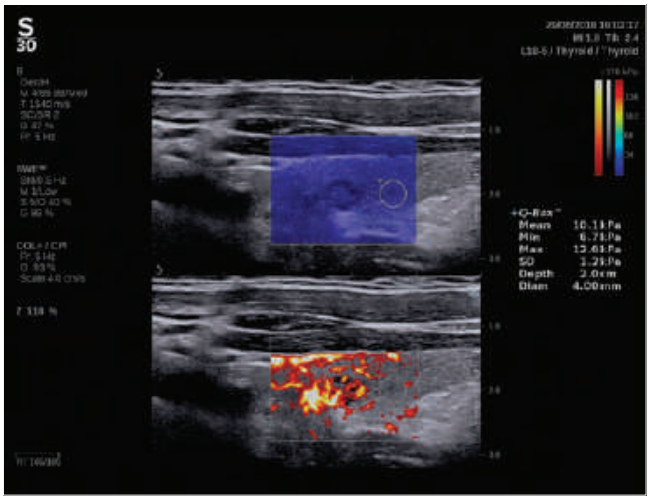


Angio PLUS

Angio PLUS mode allows you to assess microvasculature with incredible spatial resolution and high-frame rate, all without compromising the B-mode.

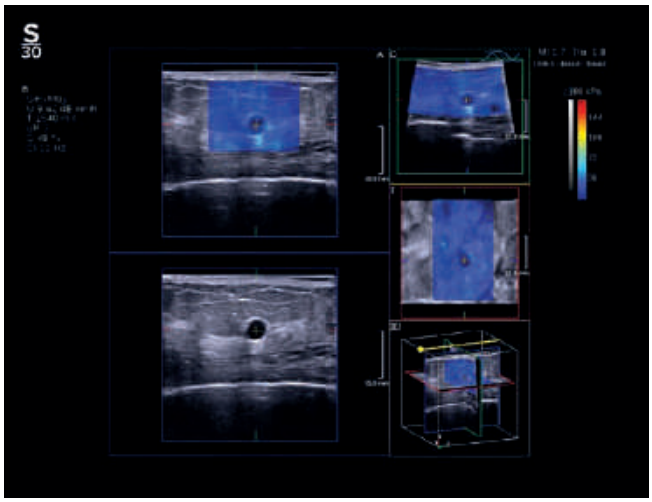
TriVu

TriVu combines real-time simultaneous imaging of B-mode, ShearWave™ PLUS and Angio PLUS. This enables you to visualize the anatomy, the function (tissue stiffness) and blood flow on the same image, at the same time.



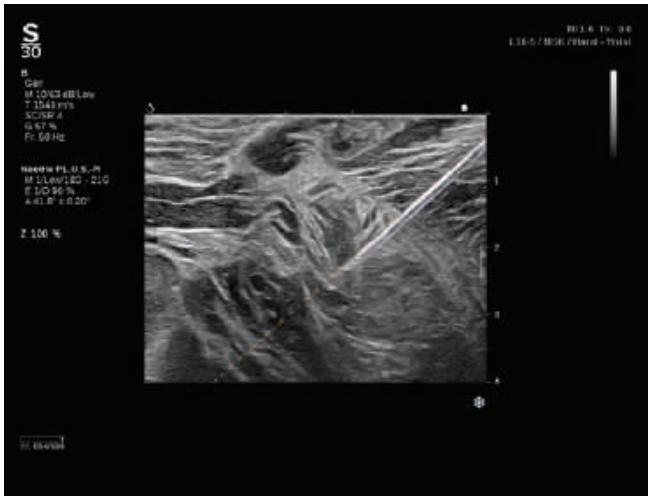
3D Breast Imaging

The SuperSonic® MACH™ ultrasound systems now provide access to high-resolution B-mode and ShearWave PLUS elastography 3D volumes. 3D ultrasound imaging opens the door as an additional application in breast diagnostics and may support in accurate interpretation.



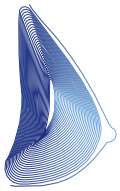
Needle PLUS

Needle PLUS allows you to not only to enhance the visualization of the needle, but it also predicts its trajectory.
This real-time imaging mode allows you to perform biopsies with precision and confidence, without loss of B-mode information.



General Imaging

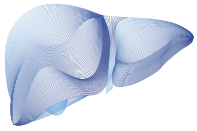
Turning Technological Innovation into Clinical Value



Breast

Offering exclusive features designed to facilitate everyday productivity and improve patient management and outcomes.

- Enhance breast lesion diagnosis and characterization, including breast 3D assessment.
- Improve clinical decision-making for biopsy and treatment.
- Access prognostic information.



Liver

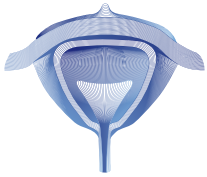
Meeting the needs of liver experts focused on patients with chronic and focal liver disease; allows the user to follow patients throughout the continuum of care.

- Quickly and reliably assess liver fibrosis and liver steatosis.
- Non-invasively follow up and monitor patients over time.
- Screen and characterize focal liver lesion.

Muscles, Tendons, Joints & Nerves

Enhancing overall diagnostic capabilities for the musculoskeletal systems.

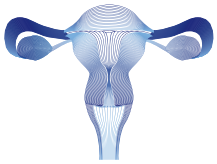
- Screen and assess musculoskeletal injuries.
- Explore both inflammatory and mechanical disorders.
- Obtain precise characterization of the musculoskeletal unit for a more confident diagnosis.



Masculine Health

A multi-parametric modality for masculine health.

- Screen for prostate cancer and characterize lesions.
- Conduct multiparametric prostate assessments and therapy monitoring.
- Perform targeted prostate biopsies.



Obstetrics & Gynecology

Visualizing clearly fine morphological structural details of the ovaries, adnexa and endometrium.[16, 17]

- Detect and characterize gynecological pathologies.
- Choose a comprehensive fetal imaging and reporting solution.
- Add real-time stiffness assessment and measurement of the tissues.

Thyroid

Delivering accurate exam information critical to your thyroid diagnostic challenges.

- Simultaneously assess thyroid morphology, microvascularization and stiffness in real time with TriVu.
- Perform multiparametric nodule characterization and TI-RADS classification.
- Take advantage of ShearWave elastography, which renders a real-time, quantitative (kPa) color-coded assessment, to characterize both thyroid nodules and cervical lymph nodes and guide biopsies.

Pediatric

Dedicated optimized presets to meet all imaging needs.

- Gain key information (morphology, stiffness and micro vascularization) with real-time multiparametric assessments to enhance diagnostic efficiency and patient monitoring.
- Leverage new ultrasound biomarkers to optimize and guide patient management at an early stage.
- Tailor it to your requirements; a family of pediatric transducers and application-specific presets.

Vascular

Expanded capabilities thanks to a unique software based technology.

- Perform stenosis staging in 3 different locations simultaneously and in a single acquisition during the same cardiac cycle with UltraFast Doppler.
- Conduct ultrasensitive blood flow analysis without compromise with Angio PLUS.
- Improve patient management and monitoring with advanced vascular analysis.

Evolution and Partnership

Setting up New Standards in Ultrasound

2020
3D probe on
SuperSonic® MACH™ 30

2019
SuperSonic Imagine
joins Hologic

2019
SuperSonic MACH 20

2018
ShearWave™ PLUS
the next generation
of SWE

2018
SuperSonic MACH 30

2017
Aixplorer ©
Ultimate

2016
More than 500 peer-reviewed
publications demonstrating unique
clinical performance of SWE across
multiple clinical applications

2010
SWE 1.0 for
Liver and
Prostate

2009
Aixplorer
4-connectors system

2009
First commercial system with
ShearWave elastography
(SWE): Aixplorer

Connected Experience

SuperSonic® MACH™ 30 facilitates exchanges and ensures that information is always available in the right place at the right time.

- On-time intervention through remote system monitoring and diagnostics.
- Access to new options and features with an online software update.
- Disk encryption at installation to protect patient's personal data.
- Password requiring login to ensure that user preferences are preserved.
- DICOM compatibility and multiple connection ports for greater flexibility.

An Eco-designed Product

Hologic is certified ISO 14001. This certification confirms that the company has voluntarily implemented an environmental management policy, demonstrating a strong commitment to minimize environmental impact throughout the product's life cycle.

1/ Bercoff J, Ultrafast Ultrasound Imaging. Ultrasound Imaging - Medical Applications.2011 Aug; DOI: 10.5772/19729

2/ MACH 30 V1 Evaluation Report Hôpital privé Jean Mermoz july, 5th & 6th 2018. PM.TP/TR.092

3/ MACH 30 V1 Evaluation Report CHRU Jean Minjoz - Besançon – France. PM.TP/TR.093

4/ MACH 30 V1 SSI in-house. PM.TP/TR.094

5/ Cosgrove D, Berg W, Doré J et al. Shear wave elastography for breast masses is highly reproducible. European Radiology. 2012 May; 22(5): 1023–1032.

6/ Hudson J, Milot L, Parry C et al. Inter-and intra-operator reliability and repeatability of shear wave elastography in the liver: a study in healthy volunteers. Ultrasound Med Biol. 2013 Jun;39(6):950-5

7/ Garcovich M, Veraldi S, Di Stasio E et al. Liver Stiffness in Pediatric Patients with Fatty Liver Disease: Diagnostic Accuracy and Reproducibility of Shear-Wave Elastography. Radiology. 2017 Jun; 283(3):820-827.

8/ Peer Reviewed Articles ShearWave™ Elastography for Breast Imaging. MKG.EC.335

9/ Berg WA, Cosgrove DO, Doré CJ, et al. Shear-wave elastography improves the specificity of breast US: the BE1 multinational study of 939 masses. Radiology. 2012 Feb;262(2):435-49.

10/ Mullen R, Thompson JM, Moussa O et al. Shear-wave elastography contributes to accurate tumour size estimation when assessing small breast cancers. Clin Radiol. 2014;69(12):1259–1263.

11/ Peer Reviewed Articles ShearWave™ Elastography for Liver and Abdominal Imaging, MKG.EC.337,

12/ Lee SH, Chang JM, Han W, et al. Shear-Wave Elastography for the Detection of Residual Breast Cancer After Neoadjuvant Chemotherapy. Ann Surg Oncol. 2015;22 Suppl 3: S376–S384.

13/ Gao Y, Zheng J, Liang P, et al. Liver Fibrosis with Two-dimensional US Shear-Wave Elastography in Participants with Chronic Hepatitis B: A Prospective Multicenter Study. Radiology. 2018 Nov;289(2):407-415.

14/ Garcovich M, Veraldi S, Di Stasio E, et al. Liver Stiffness in Pediatric Patients with Fatty Liver Disease: Diagnostic Accuracy and Reproducibility of Shear-Wave Elastography. Radiology. 2017;283(3):820–827.

15/ In comparison with Aixplorer® MultiWave™ systems

16/ Engineering Clinical Evaluation (Ece) V10 Endocavity Probes Evaluation in Gynecology Dr Shojai Aix En Provence; PM.TP/TR.034

17/ V10 CMR Validation – Institut de Radiologie de Paris – Gynecology; PM.TP/TR.036

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